

# Light

## Notes

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<http://www.brainpop.com/science/energy/light/>

Light

energy you can see

### Light source

something that gives off its own light

### Natural light

light from nature

Examples of natural light

- sun
- stars
- lightning

### Artificial light

light produced by people

Examples of artificial light

- lamp
- candle
- flashlight

When light strikes an object

it can be:

- absorbed
- reflected
- refracted

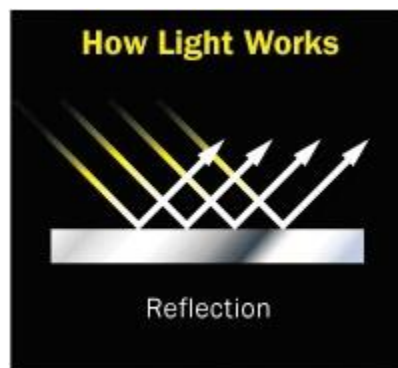
### Absorb

light is taken in by an object



## Reflect

light bounces off an object



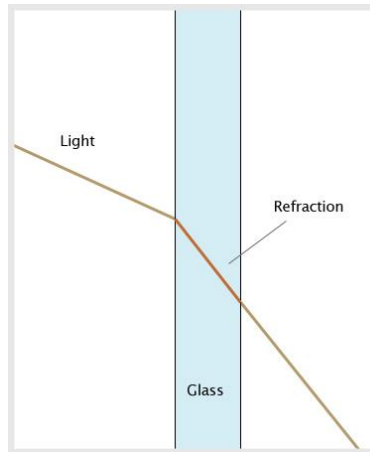
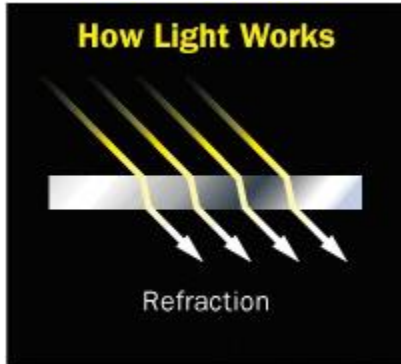
We see an object when light reflected from the object reaches our eyes

Example: moonlight is reflected sunlight

Smooth, shiny surfaces reflect the most light

## **Refract**

light bends when passing through an object



<http://www.brainpop.com/science/energy/refractionanddiffraction/>

## **Light**

### **Check Your Understanding**

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1. Which light sources in the pictures are natural? Which ones are artificial?

*The natural light sources in the pictures are \_\_\_\_\_ and \_\_\_\_\_.  
The artificial light sources are \_\_\_\_\_ and \_\_\_\_\_.*

2. What is moonlight?

*Moonlight is \_\_\_\_\_.*

3. What happens when light strikes an object?

*When light strikes an object, it can be \_\_\_\_\_ , \_\_\_\_\_ , or \_\_\_\_\_ .*

4. What sources of light do you use during the day? What about at night?

*The sources of light I use during the day are \_\_\_\_\_ and \_\_\_\_\_ .*

*The sources of light I use at night are \_\_\_\_\_ and \_\_\_\_\_ .*

White light

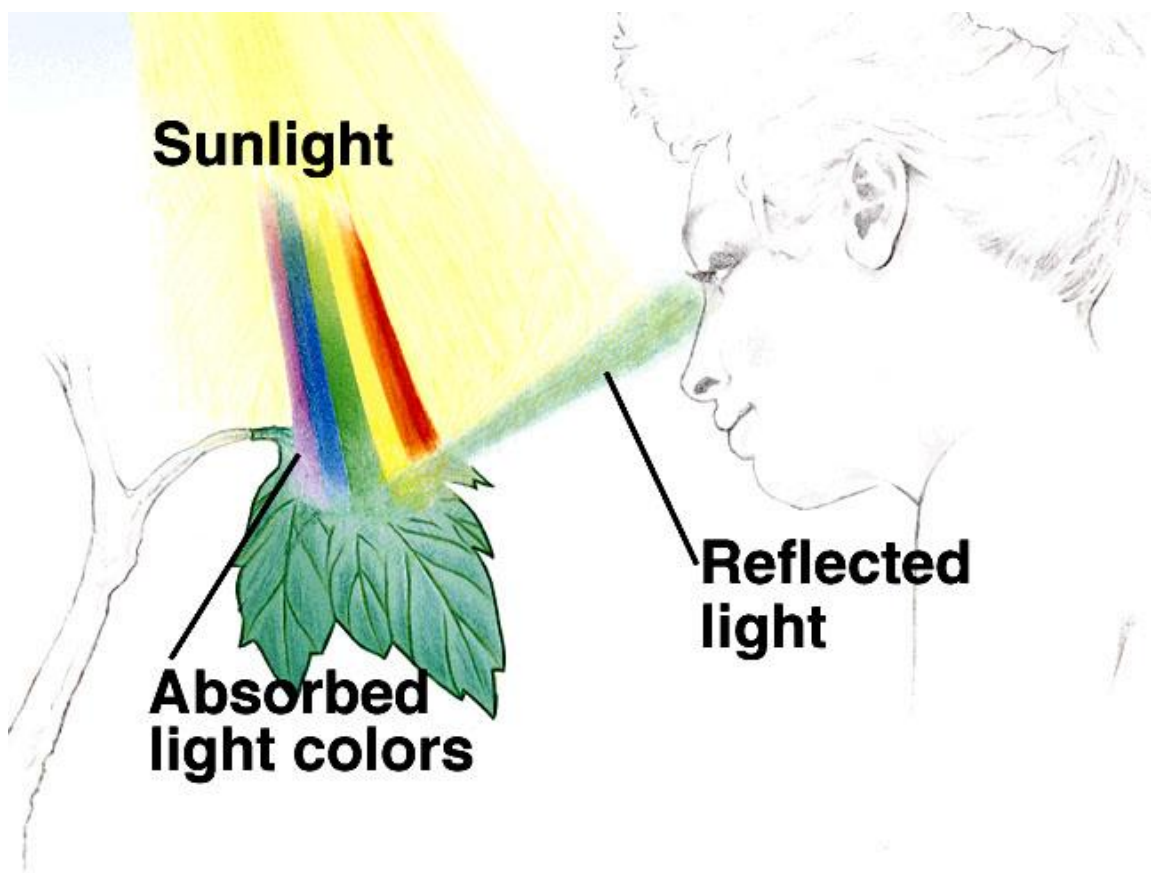
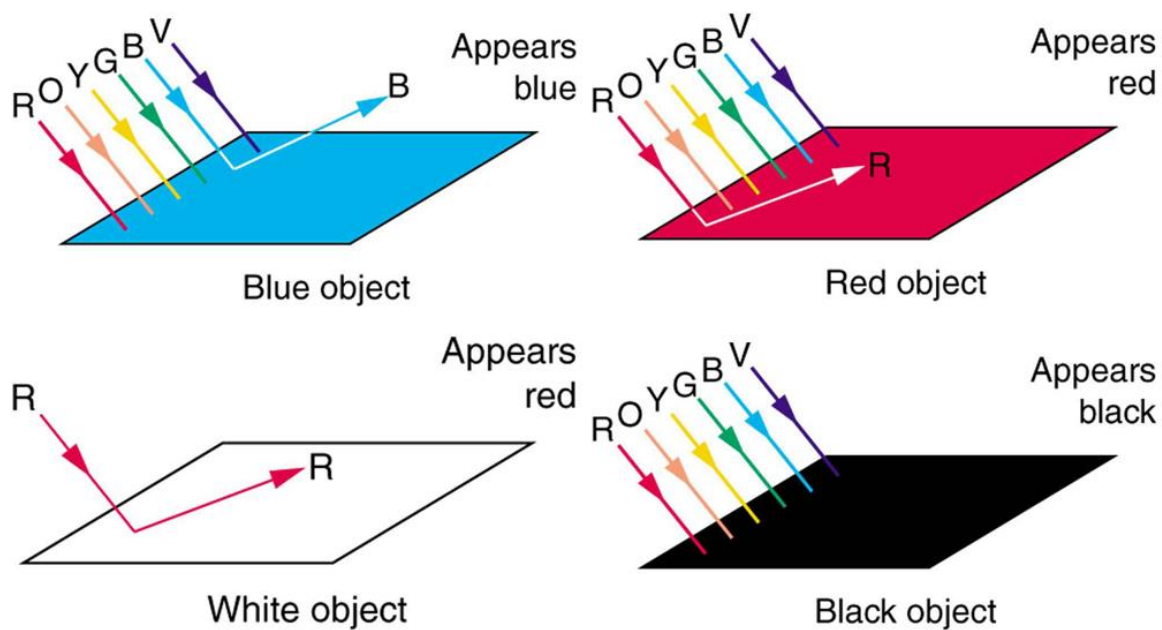
contains all the colors of light

An object's color

depends on the colors of light it reflects and absorbs

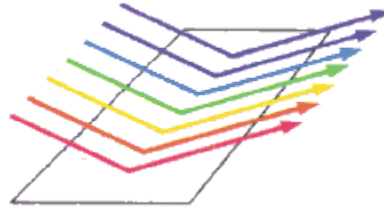
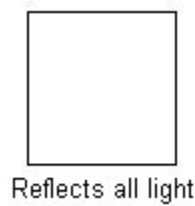
Example: a green leaf absorbs all colors except green

It reflects green light to your eyes



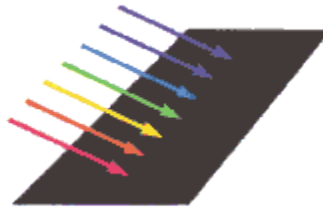
White objects

reflect all colors of light



Black objects

absorbs all colors of light



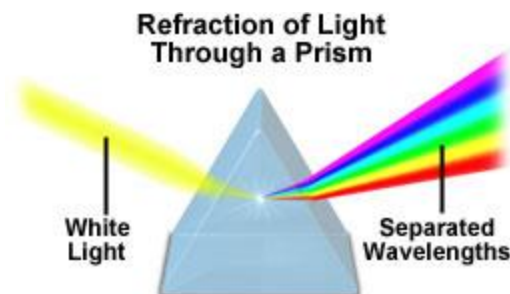
## Prism

divides white light into its colors

As light enters the prism, the light refracts

Each color of light bends differently

The light passes through the prism and separates into different colors



<http://www.brainpop.com/science/energy/color/>

## Light

### Science Skill

#### Interpreting Photos

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1. What color of light is shining on the truck in each photo? What colors of light is the truck reflecting?

*In the first picture, the truck is reflecting \_\_\_\_\_ light that is shining on it. In the second picture, The truck is reflecting \_\_\_\_\_ light that is shining on it.*

2. What color would the truck look in red light?

*If a red light shines on the truck, it can only reflect \_\_\_\_\_ light.*

3. If a truck absorbs all colors of light, what color is the truck?

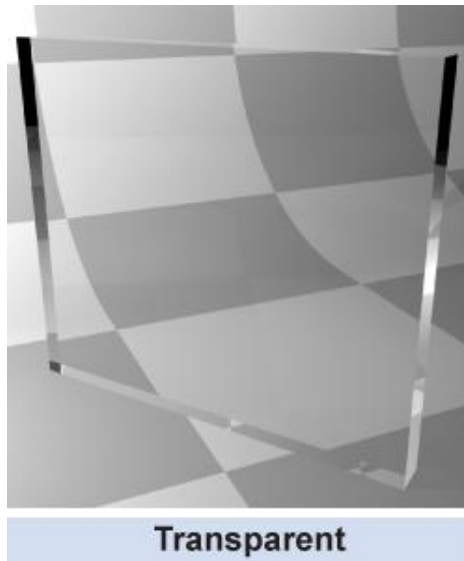
*If a truck absorbs all colors of light, the color of the truck is \_\_\_\_\_ .*

## **Transparent**

material that allows light to pass through it

Examples:

- car windshield
- windows of a house
- eyeglasses



## **Translucent**

material that allows some light to pass through it

Examples:

- frosted glass
- water
- prism

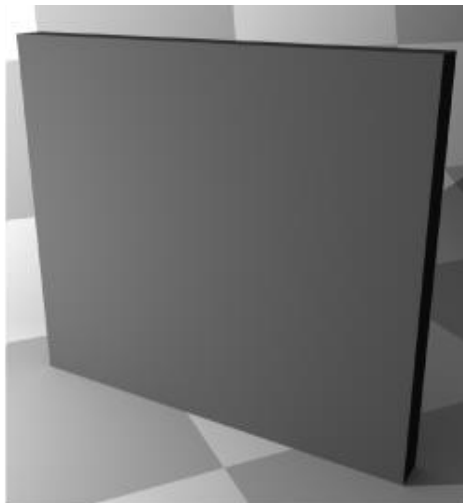




Translucent

## Opaque

material that does not allow any light to pass through



Opaque

## Light

### Check Your Understanding

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1. What type of surface reflects the most light? Give examples.

*The type of surface that reflects the most light is \_\_\_\_\_. Examples of this type of surface are \_\_\_\_\_ and \_\_\_\_\_.*

2. What causes an apple to look red?

*An apple looks red because \_\_\_\_\_.*

3. What type of material does not let any light pass through?

*The type of material that doesn't let any light pass through is \_\_\_\_\_.*

4. List ten objects you see in the room. Classify each as transparent, translucent or opaque.

Transparent	Translucent	Opaque